Analysis of categorical data in presence of latent random effects using Structural Equation Modeling: an application

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Abstract

In most medical research, of interest is to establish the causal relationships that exist between variables which may be direct or indirect. This research intends to use structural equation modeling technique to analyze the effect of categorical latent variable(s) when assumed to follow a normal random effect model. The statistical inference is carried out under the Mplus statistical software and the developed models validated using empirical data from Kenya Aids Indicator Survey (2007).

Keywords: Structural Equation Modeling, Categorical Variable, HIV/AIDS, Random Effect